UNLOCKING STRATEGIC INSIGHTS FROM NYSE DATA

AGENDA

- Intro

- Summary Statistics

- Additional Graphical Exploration

- Analysis & Insights

ANALYZING NYSE DATA: INSIGHTS FOR STRATEGIC DECISION-MAKING

- **Objective:** Leveraging NYSE data to extract actionable insights for informed business strategies.

- **Approach:** Utilized a cleaned dataset spanning 2013-2015 for comprehensive analysis.

- **Key Focus Areas:**

  - Summary statistics by GICS Sector and Sub-Industry.

  - Sector-specific trends through graphical exploration.

- **Findings:** Revealed significant variance in industry performance, revenue distribution trends, and company-specific financial metrics.

- **Implications:** Informing strategic decision-making and identifying growth opportunities.

DATA SELECTION FOR INSIGHTFUL ANALYSIS

Total Revenue Variability
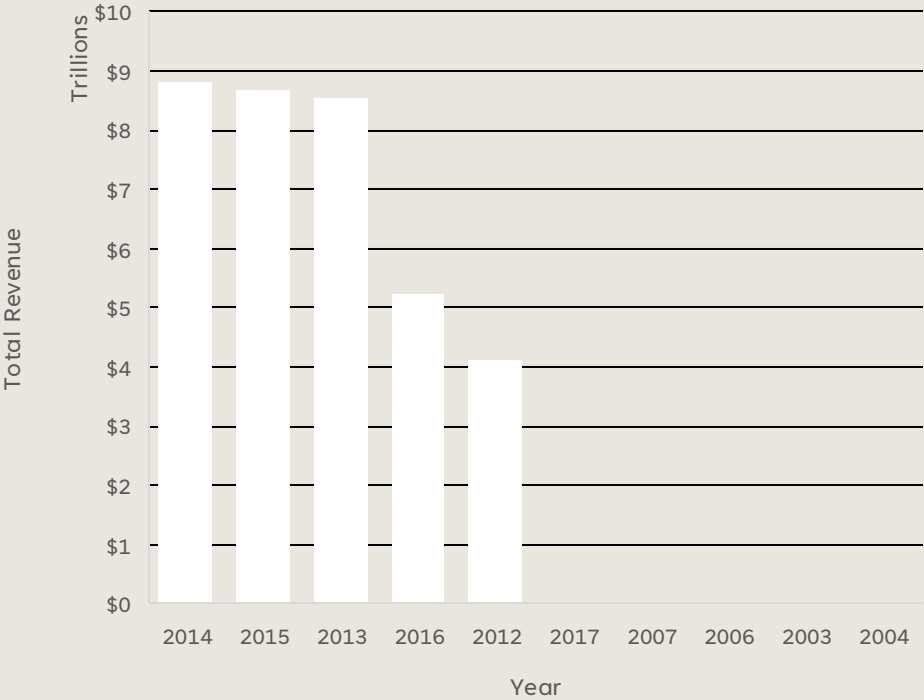
Analysis focused on data from 2013 to 2015 due to consistent concentration.

Data Point Distribution by Year

| GICS Sector	2012	2013	2014	2015	2016
Consumer Discretionary	26	75	72	77	57
Consumer Staples	10	32	31	32	23
Energy	23	31	31	31	8
Financials	34	41	41	41	7
Health Care	25	47	47	46	24
Industrials	26	62	61	62	37
Information Technology	18	55	57	59	41
Materials	17	23	23	24	8
Real Estate	22	26	26	26	4
Telecommunications Services	5	5	5	5	
Utilities	20	24	24	24	4
Grand Total	226	421	418	427	213

EXPLORING SUMMARY STATISTICS

Consumer Staples and Energy exhibited the highest diversity in ticker performance, based on their respective Standard Deviations, relative to their Medians. Their ranges were also significantly higher than any other sector's ranges.

GICS Sector	Number of Tickers	Median	Average	Range	Standard Deviation	Total Revenue
Consumer Staples	33	$13,859,500,000	$43,407,926,144	$485,649,486,000	$85,164,342,107	$5,729,846,251,000
Consumer Discretionary	77	$8,441,971,000	$18,318,138,785	$165,617,000,000	$28,297,014,267	$5,623,668,607,000
Energy	31	$11,777,257,500	$38,984,796,516	$450,327,296,000	$79,542,130,796	$4,834,114,768,000
Health Care	48	$8,563,050,000	$23,463,223,026	$190,303,585,000	$37,611,576,772	$4,458,012,375,000
Industrials	62	$9,969,168,500	$16,547,665,399	$94,706,152,000	$17,561,525,041	$4,103,821,019,000
Information Technology	59	$5,039,000,000	$15,925,183,565	$232,841,408,000	$31,996,965,283	$3,662,792,220,000
Financials	41	$10,375,126,500	$20,825,589,774	$100,409,423,000	$26,341,693,365	$3,415,396,723,000
Telecommunications Services	5	$18,063,000,000	$57,537,392,650	$142,039,000,000	$58,621,732,753	$1,150,747,853,000
Materials	24	$9,648,000,000	$11,834,515,579	$43,576,099,000	$9,092,772,983	$1,124,278,980,000
Utilities	24	$10,900,461,000	$11,135,678,865	$28,506,074,000	$6,190,887,364	$1,069,025,171,000
Real Estate	26	$2,088,012,500	$2,511,715,663	$10,446,414,000	$1,989,238,934	$261,218,429,000

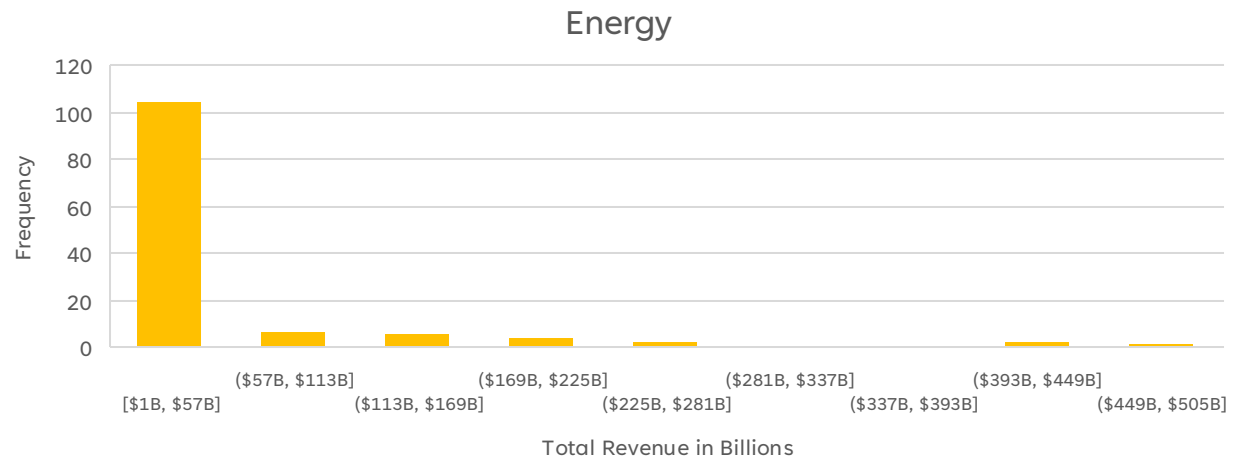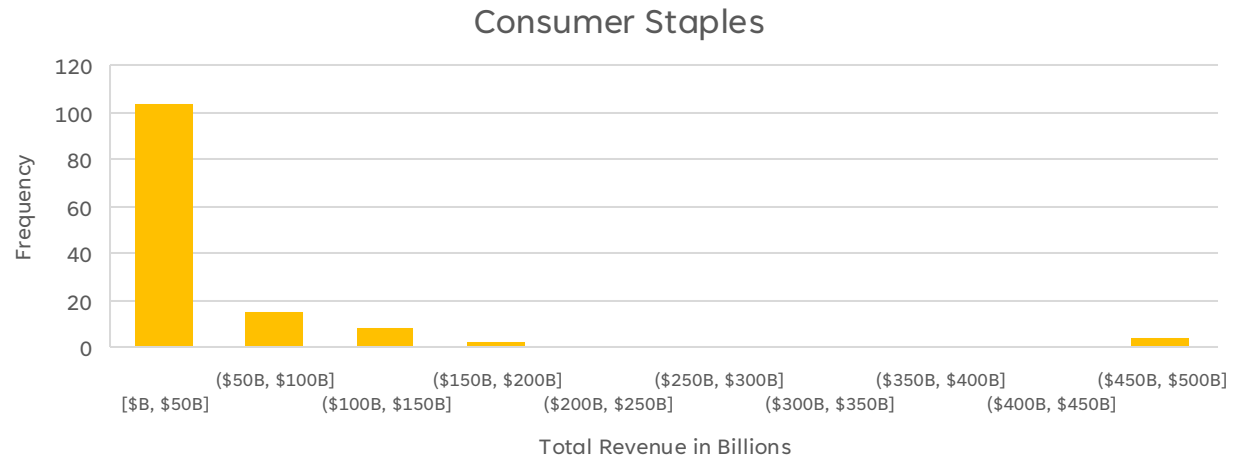# SECTOR ANALYSIS: CONSUMER STAPLES, ENERGY, & TELECOM SERVICES

Consumer Staples, Energy, and Telecom Services sectors display significant right skewness, marked by substantial gaps between their medians and means, along with the highest standard deviations and averages across all sectors. Outliers notably influence these metrics, pushing the average above the median.

| GICS Sector	Total Number of Tickers	Range	Standard Deviation	Total Revenue	Average - Median
Consumer Staples	33	$485.6B	$85.2B	$5729.8B	$29.5B
Consumer Discretionary	77	$165.6B	$28.3B	$5623.7B	$9.9B
Energy	31	$450.3B	$79.5B	$4834.1B	$27.2B
Health Care	48	$190.3B	$37.6B	$4458.B	$14.9B
Industrials	62	$94.7B	$17.6B	$4103.8B	$6.6B
Information Technology	59	$232.8B	$32.B	$3662.8B	$10.9B
Financials	41	$100.4B	$26.3B	$3415.4B	$10.5B
Telecommunications Services	5	$142.B	$58.6B	$1150.7B	$39.5B
Materials	24	$43.6B	$9.1B	$1124.3B	$2.2B
Utilities	24	$28.5B	$6.2B	$1069.B	$.2B
Real Estate	26	$10.4B	$2.B	$261.2B	$.4B

Skewness in NYSE Total Revenue
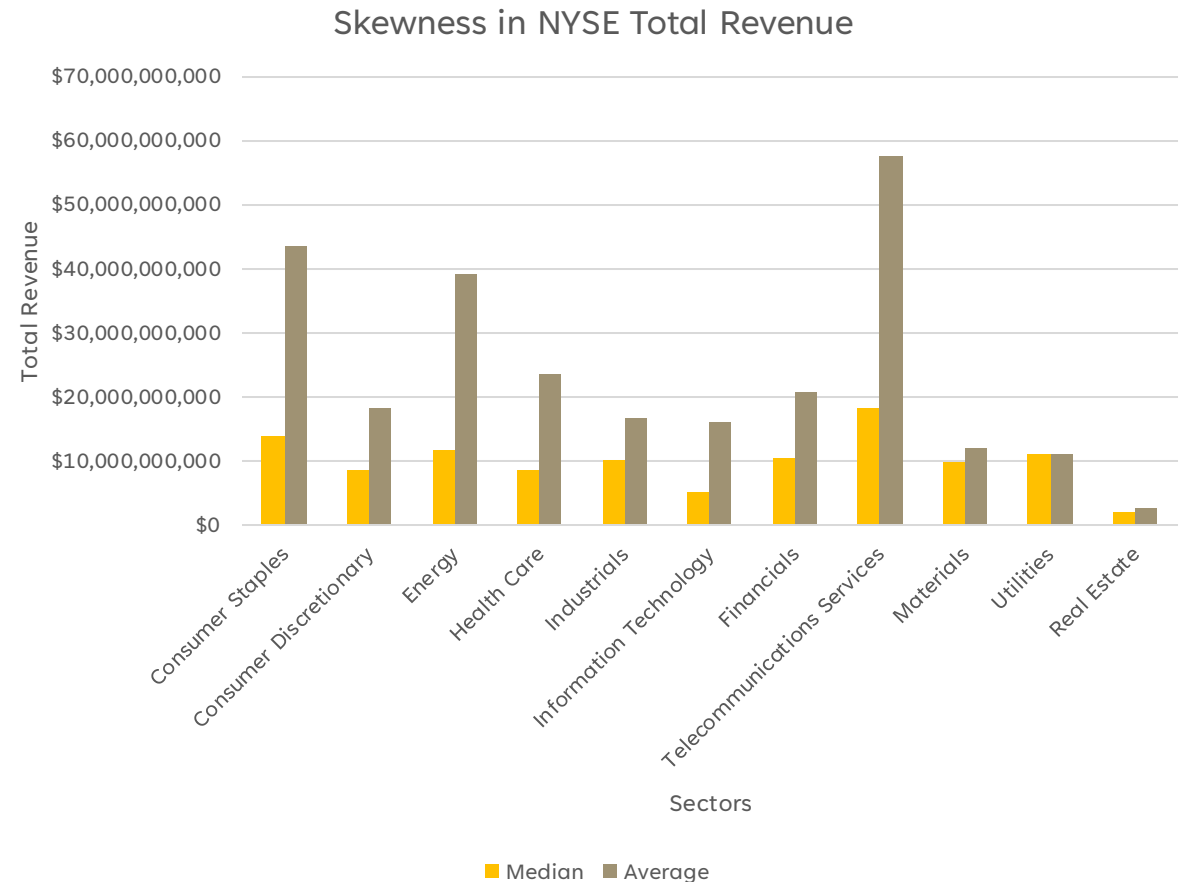
OUTLIERS DRIVING SKEWNESS

- **Hypermarkets & Super Centers, a Sub Industry of Consumer Staples, has an average total revenue of $295.68 trillion, surpassing the sector average by $252.27 trillion. It holds two of the top 3 performing tickers in the market, for the given timeframe.**

- **In the Energy sector, Integrated Oil & Gas stands out with the widest range ($380.5 trillion) among all subsectors and the second highest standard deviation ($152.95 trillion) in total revenue. This suggests significant variability among companies' performances, with a range from $2.79 trillion to $451.51 trillion.**

Consumer Staples

Frequency vs Total Revenue in Billions

X-axis bins: [$B, $50B], ($50B, $100B], ($100B, $150B], ($150B, $200B], ($200B, $250B], ($250B, $300B], ($300B, $350B], ($350B, $400B], ($400B, $450B], ($450B, $500B]

Energy

Frequency vs Total Revenue in Billions

X-axis bins: [$1B, $57B], ($57B, $113B], ($113B, $169B], ($169B, $225B], ($225B, $281B], ($281B, $337B], ($337B, $393B], ($393B, $449B], ($449B, $505B]

- **The outliers were largely dominated by Drug Retail (CVS), Hypermarkets & Super Centers (KR, COST, WMT), and Energy sectors including Integrated Oil & Gas (CVX, XOM) and Oil & Gas Refining & Marketing (MPC, PSX, VLO).**

- **These companies drove the range disparity and immensity, and each had total revenue greater than their respective sectors' standard deviations.**

- **Consumer Staples: CVS, KR, COST, and WMT showed consistent revenue growth.**
- **Energy: CVX, XOM, and MPC exhibited fluctuating revenues and declining margins.**
- **Telecom Services: T and VZ experienced revenue and margin fluctuations.**
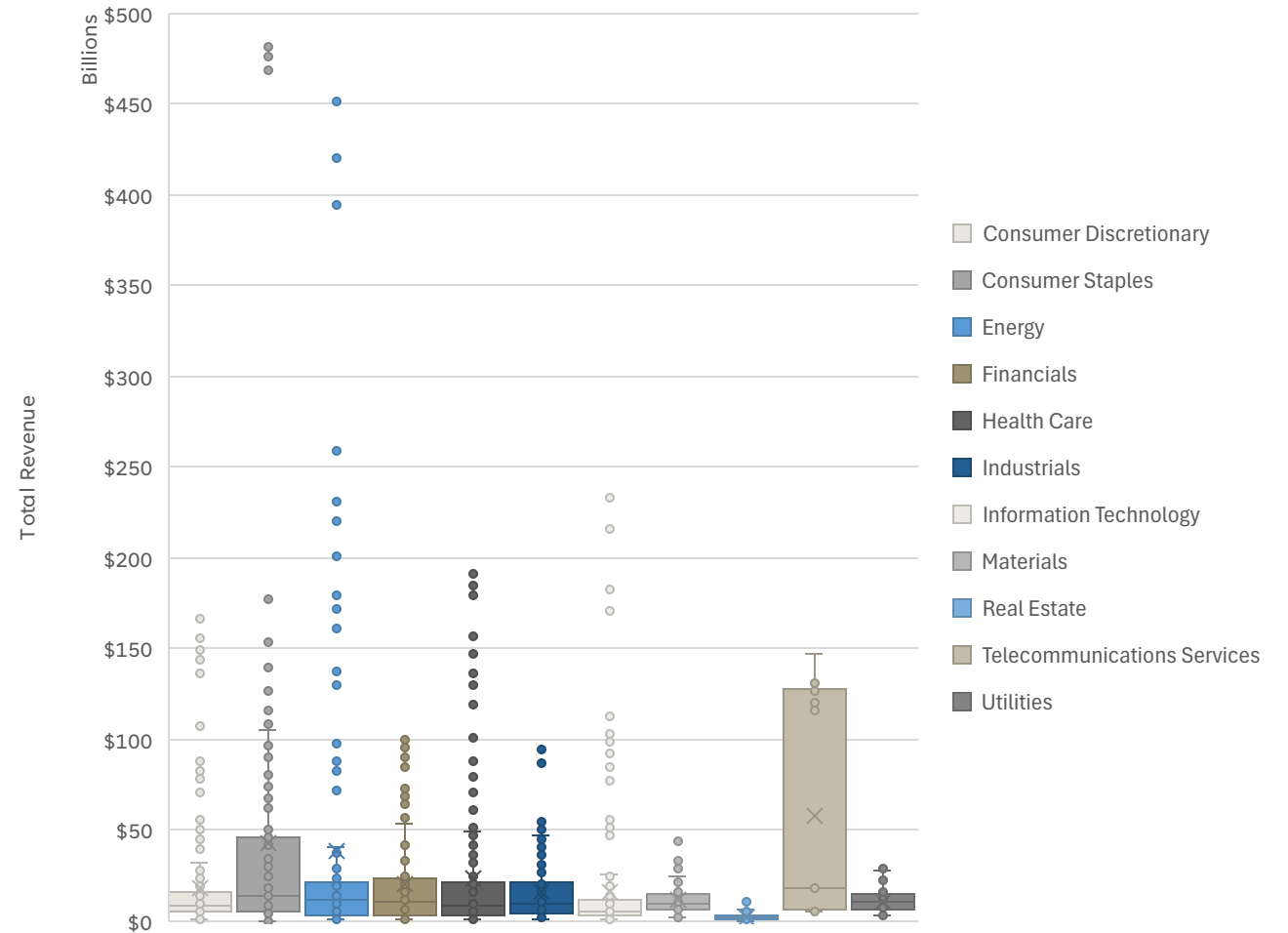
2015: ENERGY, CRASH. HEALTH CARE, CLIMB.
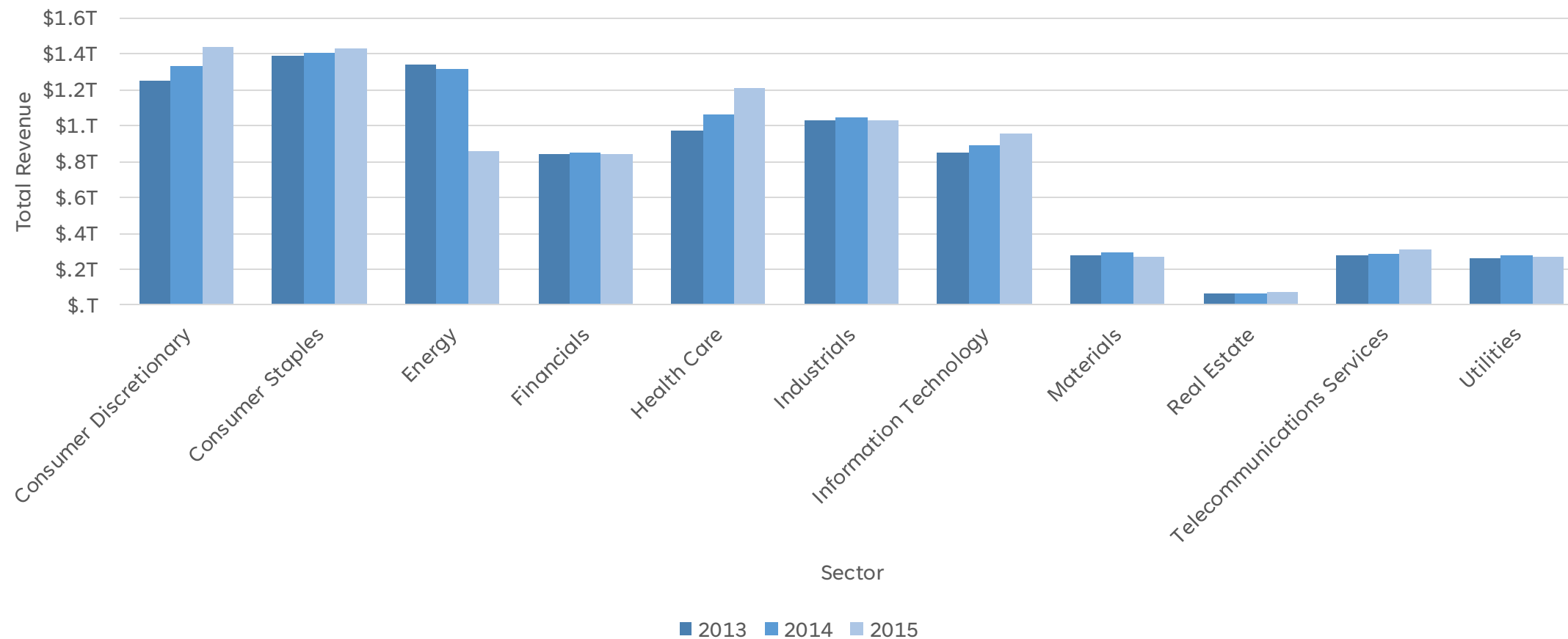
REVENUE HEATMAPS: ENERGY & HEALTHCARE ($BILLIONS)

GICS Energy Sub Industries	2013	2014	2015
Integrated Oil & Gas	$677.3B	$633.7B	$411.6B
Oil & Gas Drilling	$3.4B	$3.7B	$3.2B
Oil & Gas Equipment & Services	$71B	$78.9B	$54.1B
Oil & Gas Exploration & Production	$124.5B	$143B	$85.7B
Oil & Gas Refining & Marketing & Transportation	$467.B	$452.6B	$307.2B

GICS Health Care Sub Industries	2013	2014	2015
Biotechnology	$48.2B	$68B	$82.1B
Health Care Distributors	$339.1B	$376.3B	$446.8B
Health Care Equipment	$87.3B	$95.1B	$96.7B
Health Care Facilities	$58.9B	$63.2B	$69.6B
Health Care Supplies	$8.2B	$8.2B	$8.4B
Health Care Technology	$2.9B		$3.4B
Life Sciences Tools & Services	$3.8B	$4.3B	$2.4B
Managed Health Care	$278.1B	$304.3B	$351.2B
Pharmaceuticals	$142.1B	$143.9B	$145.4B

KEY INSIGHTS

- **Energy Crash & Healthcare Surge:** 2015 saw a steep revenue drop in the energy sector, while healthcare experienced a spike, likely tied to the Supreme Court's ruling on Affordable Care Act subsidies.[1]

- **Sector Variance:** Industries like Food & Staples Retailing, Oil & Gas, and Technology Hardware show significant revenue fluctuations, highlighting diverse sector performance.

- **Trend Analysis:** Data mostly concentrated between 2012-2016, with peaks in 2014 and declines in 2015-2016, indicating market volatility.

- **Industry Impact:** Key contributors to sector variance include Hypermarkets & Super Centers, Integrated Oil & Gas, and Computer Hardware.

SOURCES

Energy Sector

https://www.marketwatch.com/story/the-energy-sector-changed-forever-in-2015-2016-01-05

Health Care Sector

https://money.cnn.com/2015/06/25/investing/obamacare-ruling-health-stocks/index.html